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instances, and probably indefinitely, as it was invented before the ambition for or attainment of literary eminence insisted on a copyright. The four certain instances before a score of years of the thirteenth century had passed are the second form of strophes in the Minnesangs Frühling under the title von Kürenberg, König Ortnit, Alpharts Tod, and the Nibelungen. The beauty of the so-called Kürenberger strophes may have influenced the composer of the Nibelungen in his choice of metre, and led him unconsciously to adopt forms of expression identical with some elements in the few strophes that easily remained in his memory and inspired his imagination. But there is not a vestige of *proof* that Der von Kürenberg wrote either one of the lyric strophes in the Paris manuscript under his name or the Nibelungen, and had it not been for the German scholar's unwillingness to leave so grand an epic nameless, we may believe that this theory would never have been promulgated.

XII.—On Dissimilated Geminatio*n*.

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Students of etymology work on the theory that every letter in a word is a bearer of meaning. The roots, indeed, in the Indo-European tongues are generally accepted provisionally as in some sort integers, and their ultimate elements are left untormented; but every letter which is added to them, and every change which is made in them, is treated as a modifier of the sense. An addition is often a plain compounding with another familiar word, as in the Gothic *libái-dêdum*, live-did; and when it is not so, the added letter is taken for a relic of such a word, as the d of lived is a relic of did. Scientific etymologists accept the derivation of no word as complete, until the original words from which each letter

sprang have been fully made out. This procedure has given rise to some of the most important discoveries of the modern Science of Language. (1) surprising number of obscure combinations have been traced back and explained, and the investigations have led to new comprehension of the laws of language and of thought, and especially of the formation and meaning of declensions and conjugations and all the apparatus of grammar. Even the most obscure vowel changes, which had been supposed to found in rhythmical laws like the Chinese significant tones, are found in Indo-European to spring from contractions of early compounds, or to be accentual effects resulting from added syllables. The euphonic additions of the old grammars have nearly all disappeared. Third rate investigators, to be sure, who must always have some indefinite power to explain the unknown, have come to use pronominal roots pretty freely as a refuge for ignorance, but if the scientific etymologist looks twice at a "pronominal root," he looks three and four times at a "euphonic addition."

This general theory is, however, to be applied with some modifications, and is subject to some exceptions.

1. After a form has become established it will be used in new words by conformation without any precedent composition. We write telegraphed in conformation with lived, loved, washed, and the like, without making a contraction of telegraph-did. (2). A like conformation sometimes takes place where there is no sense in it, simply by the assimilating force of some striking and frequent combination of sounds, as in *escarboucle*, *carbunculus*; *escrevisse*, German *krebiz*, *krebs*, which in Old French assume an *es* through the assimilative power of words beginning with *esc*-. (3). Where there is varying pronunciation, e. g., some speakers dropping their *h*'s, others sounding them, a letter may be attached to a word by blunder, as in hermit for eremite: it has lately been attempted to exalt this fact into an important law of speech, explaining "Grimm's Law," and many other hard problems. (4). Somewhat similar is the use of new letters when a race takes up a word from another race having different habits of speech, as in the Norman *gu* for the German *w*: *guile* for

wile; *guerre* for war, Old English *werre*; *Guillaume* for *Wilhelm*, and the like. (5). This bringing together by syncope or ecclipsis, or by composition, of letters hard to pronounce together.

But these are all rare except the first, which is rather an interpretation of the general rule than an exception to it.

A more important exception is found in the doubling of letters. Sound gravitates to accented syllables. According to the received opinion, the accentual systems of most modern languages have changed. The grammatical system, in which that syllable is accented which last modifies the general notion, so that the affixes of declension oftenest receive the accent, gave way in Greek and Latin to the rhythmical system, according to which the number and quantity of the syllables of a word determine its accent, and gave way in the Germanic languages to the logical system, in which the accented syllable is the first of those expressing the main notion. It is also believed that stress has come into use as the essential quality of accent in the place of pitch, which had been most noticed by the Indians, Greeks, and Romans. These changes in the place and the nature of accent have produced considerable changes in the letters of many words. Unaccented syllables tend constantly to lighten and disappear, accented syllables tend to lengthen. And these processes are often so related that one compensates for the other, and the time of the whole word is unaltered, as though time were more constant than any quality of sound. The time added to the accented syllable is sometimes given to the vowel and sometimes to the consonant. The simple prolongation of a vowel sound does not usually attract much attention, though it is often denoted in the Germanic languages by writing the letter twice. When a continuous consonant is prolonged or a mute is held, we hear the closing of the organs in connection with the preceding vowel, and the opening of them in connection with the following vowel, and we count the closing and the opening as separate sounds, and represent them by writing the consonant twice; the first *p* in happy represents the closing of the lips in hap-, the second *p* represents the opening of the

lips in -py. This second *p* is said to be caused by gemination—a sort of fissiparous generation. In English it is so frequent a fact that an accented root-syllable doubles its final consonant when a syllable of inflection or derivation is added, that it is sometimes given as a rule. There are also many other words in which gemination of a consonant has taken place in connection with the shortening of the preceding vowel; mummy, Old French *mumie*; manner, French *maniere*; Late Latin *maneria*; dinner, French *dîner*; gallop, French *galoper*; quarrel, Old French *querelle*, Latin *querela*; matter, Old French *matere*, Latin *materia*, and many more which may be found collected in Maetzner, i., 180–182.

But it often occurs that the following letter, or some other cause, modifies the sound produced by the parting of the organs so as to render it unlike that produced by their closing, and in place of a simple doubling a strange letter then appears. This may be called dissimilated gemination.

If the term be applied with a certain freedom to all cases where an emerging letter is added to another letter by a slight modification of the closing or opening movement of the older letter, it affords a convenient classification for a considerable part of the examples of epithesis and epenthesis hitherto unexplained.

The continuous consonants give the most striking examples, and among these the nasals.

The labial nasal *m* is often doubled; but the same movement of the organs which makes *m* with the nose open, will make *b* if it be closed; hence we find *b* appearing in place of a second *m*. The most common case is before *r*, or *l*. These were originally trills, *r* of the tip, *l* of the edges of the tongue, and they required a strong current of breath in the front part of the mouth. To give this we stop the openings at the back of the mouth, closing the nasal veil. But thought runs ahead of the movements of the organs in speech, anticipates the coming sounds, and often prepares for them before their time. Anglo-Saxon *slumerian* (Old Norse *sluma*) has in German simple gemination and appears as *schlummern*, in English the lips close in *slum-*, but the anticipation of the coming *r*

leads to stopping the nose as they part, and what would have been -mer turns out -ber; and so we have slumber by dissimilated gemination. Similar are timber, Gothic *tim-rian*, German *zimmern*; ember, Anglo-Saxon *æmyrie*; number, Old French *nombre*, Latin *numerus*; remember, Old French *re-membrer*; Latin *memorare*; and with *l*, grumble, Low Dutch *grommelen*; nimble, Anglo-Saxon *nêmol*, Old English *nimmil*; fumble, Low Dutch *fummelen*; mumble; crumble; tumble; stumble; humble, Old French *humele*, Latin *humilis*; encumber, French *encombrer*, L. Latin *com-brus*, Latin *cumulus*.

This dissimilation used to be common at the end of words. The continuous consonants are generally held or prolonged when final. Final *s* and *l* are usually written double, *m* and *n* used often to be; *mann* is almost as frequent in Anglo-Saxon as *man*. The parting of the organs is not now as striking in these sounds as it is in final mutes. It is natural that the prolongation should attract the chief attention, but it seems to have been the habit in early times to open the organs from *m* or *n* more audibly than now. And the geminated *m* or *n* is often dissimilated, *mb* appearing for *mm*, *nd* for *nn*. Examples of *mb* are limb, Anglo-Saxon *lim*; thumb, Anglo-Saxon *puma*; crumb, Anglo-Saxon *cuma*; numb, older *num*. Why *m* should here change to *b* is a problem of some difficulty. It seems to be contrary to the law of least effort; limb is harder to utter than *limm*, it requires an additional movement of the nasal veil. The *b* soon became silent. If *mb* final stood alone, it might perhaps be explained away as bad spelling, or conformation of some other kind, but other continuous consonants are affected in a similar manner; changes of *nn* final to *nt*, *ss* to *st* are frequent; the vocal gesture *ss-s* is often closed with *t*. In all these cases the law of least effort seems to be contravened.

This law has not yet been as distinctly formulated as it needs to be for scientific application, and is apparently differently interpreted even by cautious philologists. Some use it as meaning the mechanical force necessary to produce

the movements of the vocal organs. The closing organs are moved further in making a complete closure for a mute than in making an incomplete one for a continuous consonant. The law of least effort requires therefore that mutes must change to continuous and not the reverse. The tip of the tongue is more easily moved than the back; therefore gutturals must change to palatals and linguals. When a consonant comes between two vowels, it requires, to make a surd, a movement of the vocal chords which is not required to make a sonant; therefore surds between two vowels tend to change to sonants, all as a sort of mechanical result. Thus defined the law of least effort expresses the action of a very large number of important factors of speech, and is capable of being brought to certainty and applied to the solution of the unknown as a working law ought to be. But it has by no means the universality which is generally attributed to the law of least effort. Mechanical or physiological forces operate on speech mainly through their action on the minds of speakers. The proximate laws of speech are laws of human action, and for laws of force to be also laws of speech, force must be translatable into what Jonathan Edwards calls motive. This will is always as the strongest motive. For the law of least effort to be good in speech, force must vary inversely as motive. As soon as this reference to motive is made, it is obvious that a thousand motives may be found which will overmatch, any one of them, the set towards a weak use of the voice in the mind of any individual man at any particular time. Children will shout with all their might by the hour for the fun of it. In fact, speaking at all implies a stronger motive than that to least effort, and any kind of motive which prompts speech may prompt to more effort than is necessary to speak. The exceptions to the law thus defined are numerous, and its firm establishment in the classic languages is due to the fact that the number of persons is so great who must concur to establish a change in such speeches, that individual peculiarities are eliminated. A considerable number of such peculiarities may be looked for in dialects, and some of them attain

position more or less approved and permanent in classic monuments. There are further changes connected with change of stress in accent, in which whole nations move together from weaker to stronger utterances.

Others speak of the law of least effort as though it were convertible with the law of strongest motive. They take it to mean that we always speak as it is easiest on the whole for us with our character and wishes and conditions. Such a law would have its place among rhetorical topics for illustrative lectures, rather than among working formulæ for investigation and discovery.

Whichever view we take of the law, it is equally in place to use motives to explain unusual changes which have occurred in speech. Thus the closing of a final continuous consonant to a mute, changing *mm* to *mb*, *ss* to *st*, *nn* to *nd* or *nt*, may be ascribed to a desire to mark the end of the word, to make a positive stop instead of letting the sound die away, or other like motive. This motive was strong enough to induce the utterance of *mb* as long as final *m* was habitually uttered with long-drawn vigorous nasal resonance, but has proved too weak to preserve it after our slighter modern *m*. We have changed from Anglo-Saxon *pum-a* to *thumm*, then to *thumb*, then to *thum*.

When a surd, for example, *t* or *s*, follows a dissimilating sonant, it assimilates the sonant to itself. Anglo-Saxon *emtig* would have gemination to *emmtig*, and this, simply dissimilated from nasal to mute, would give *embtig*; but the conception of the coming *t* leads to the parting of the vocal chords and the sending up of surd breath too soon, before the parting of the lips for *m*, and this makes *p*, not *b*, and we have empty; so Northampton, Anglo-Saxon *Norð-hâm-tûn*; tempt, Latin *tentare*. *S* has the same effect in *sempster*, *sempstress*, Anglo-Saxon *seâ mestre*; Thompson for Thomson; Sampson for Samson; and see Maetzner I., p. 175, Koch, I., p. 161. Many more words of this kind are found in Early English than in our present speech. Several examples still current in colloquial speech have disappeared from books. On the other hand the spelling

is sometimes retained where the pronunciation has become disused or unusual. In the dictionaries empty, tempt, sempster, are all given as having p silent, and some of the speculators say that p can not be pronounced between m and t or m and s. Universal negatives about facts are always suspicious, and none more deservedly so than those which deny the possibility of making unusual combinations of familiar letters. It often happens that phonetic theorists who know only their own language, or perhaps two or three kindred languages, affirm combinations to be unpronounceable, which are among the most frequent in other languages. Sounds which one tried all last week and could never make, may be caught to-morrow and come easy ever after. The organs of speech will do almost any thing in their kind, if they are tried and trained long enough. It is perfectly easy to make the p of empty or tempt or Sampson, and it is in fact made by a large part, if not the larger part, of careful speakers. There is no question of the power of saying hemp or lamp, and the addition of a t or s has nothing specially difficult. That temt cannot be uttered without putting in p might be said, since the surd breath required for t changes m to p, and it is often laid down as an axiom that a syllable consists of a single impulse of voice, and it might be thought that the same impulse could not give both surd and sonant breath. This however contradicts the plainest facts. In pronouncing temt surd breath is used for t, sonant for e and m, and then surd again for the end of the word. The vocal chords are placed in the stream of breath or removed from it at pleasure, and the adjustments of the chords and the nasal veil for the final surd sound may be made at will before or after the parting of the lips from m, in the first case making mpt, in the other mt.

Before n some examples are found in Old English: solempne, solemn; dampnation. These are to be explained like final mb, as additions of impulse; they fill a hiatus. They are different therefore from the regular change of Latin mn to mbr in Spanish, sometimes found also in Old French and other Romanic languages: Spanish *hombre*

from Latin *hominem*; *nombre* from *nomen*, and the like (Diez, I., 201). In these *n* changes first to *r*, a common weakening (Diez I., 203), as in French *ordre*, order, from Latin *ordinem*; French *coffre*, coffer, Latin *cophinus*; the *r* then brings in the *b* by regular dissimilation as before explained.

Quite similar are the changes of the lingual nasal *n*.

1. Before *r* or *l*, when there would be gemination of *n*, the closing of the nasal veil changes the latter *n* into *d*; thunder, Anglo-Saxon *punor*; kindred, Old English *cunrede*, from Anglo-Saxon *cynn*; gender, French *genre*, Latin *generis*; spindle, Anglo-Saxon *spinl*, *spindl*, Old High German *spinnala*; spider, Old English *spinnere*.

2. Final *n* (*nn*) dissimilates to *nd*; sound, Old English *soun*, *sôn*, Latin *son-us*; lend, Old English *lênen*, Anglo-Saxon *læn-an*; ribband, French *ruban*.

3. Surd dissimilation, *nn* to *nt*, is found final in words from the French: tyrant, Old French *tirant*, *tirant*, Latin *tyranus*; parchment, Old French *parcamin*, *parchemin*, Latin *pergamenum*; ancient, Old French *ancien*, Latin *antianus*; cormorant, French *cormoran*; pheasant, Old French *phaisan*. And see further Maetzner, I., pages 186, 187, Koch, I., § 166, 168.

The guttural nasal *ng*, as in *sing*, *long*, cannot be so easily traced as the other nasals, on account of the defective notation for it of the Roman and Greek alphabets, neither of them having a letter for it. In English, however, in the positions where the other continuous consonants double in the middle of words, we find that a dissimilated gemination of *ng* takes place in pronunciation, though not in spelling.

1. Before *r* or *l*, when there would be gemination of *ng*, the closing of the nasal veil changes the latter *ng* into the mute *g*: longer, from *long*, parts its nasal *ng* into *ng + g*, *long-ger*, in which the latter *g* has the same relation to *ng* that *b* has to *m* in *number*, and *d* to *n* in *thunder*; so stronger, i. e. *strong-ger*; younger, i. e., *young-ger*; ang-ger; fing-ger; ling-ger; hung-ger; and cong-ger, mong-ger, which are not quite plain. Similar

is the formation of *tangle*, i. e., *tang-gl*, from *tang*; *spangle*, i. e. *spang-gl*, from *spang*; and a number of somewhat similar words from Latin will be referred to farther on.

2. Children frequently geminate with dissimilated gemination final *ng*: *longg*, *strongg*. Final *nk* is regularly pronounced *ngk* = *ɲk*: *rank*, i. e. *rangk*, *rayk*, French *rang*, German *rang*, from the same root as *ring*, seems to give an example of surd dissimilation analogous to *tyrant*, *ancient*, etc.; so *clayk*, from *clang*, and *cliyk*, (German *klingen*, *klang*, Latin *clangere*, Greek *κέκλαγγα*).

Before surd *th* many pronounce *ng* as *ngk*, *strength* as *strengkth*, *length* as *lengkth*, but that does not seem to be a recognized pronunciation of the dictionaries. Final dissimilation to *ngk*, *thing* to *thingk*, *nothing* to *noth-ink*, is a well known vulgar or dialectic pronunciation.

Very similar to this gemination of the nasals is that of *l* before *r* into *ldr*. Anglo-Saxon *alr*, (German *eller*, would geminate to *al-ler*, but really changes to *al-der*. So in Shakespeare's *alderliebest*, 2 Henry VI, i., 1, in which *alder* is from the Anglo-Saxon *eal-ra*, of *all*. So also in the Spanish and French. Latin *pulver-is* appearing regularly in French as *polv're*, then *pol're*, would geminate to *pollre*, but is found as *poldre*, or, by another common change, *poudre*, English, *powder*. See more in Diez, Gram. Rom. i., 104. This change is also against the law of least effort; the tongue, which leaves loose edges in uttering *l*, is raised to a tight stop for *d*. This motive seems to be the same as that which leads to the change of *mnr* to *mbr*, the getting of breath for the difficult trill of the coming *r*.

Anglo-Saxon *baldsam*, Latin *balsamum* is exactly parallel with *Sampson*, *Thompson*.

The same motive which leads to saying *drownd*, *gownd* makes it natural to say *mould* for French *mouler*, though it is likely that the original *d* of the Latin *modulus*, from which the Spanish and Portuguese make *molde* by metathesis, may have had its influence. So in analogy with *tyrant*, *parch-*

ment, might be explained salt, Latin *sal*, but such t's are held to be affixes. Curtius, Gr. Et., 482.

Following the analogy of l we should expect to find its twin brother r geminating sometimes to rd, rt: French *épinard* from Old (Provence) *espinar*, Portuguese *espinafre*, Latin (*spina-fer*) *spinifer*, spinage; gizzard, French *gésier*, Latin *gigerium*; laniard, French *lanière*, Latin *lanarius*; Spaniard, German *Spanier*, Belgic *Spanjaard*; and dialectic millart for miller; mizer for miser, etc. Maetzner, I., 440. The same movement which gives rd will give rn if the nose be open: bittern, Old English bitore, French *butor*; martern, French *martre*, marten.

The gemination of s final has already been referred to; the sound of this letter is a natural vocal gesture easy to prolong, and the closing it when emphatic by shutting off, rather than gradually withholding voice, and so making st rather than ss, is made easy to every one who speaks English by the frequency with which st is uttered; it is the ending, for example, of the superlative degree and of the second person singular of the verb. In Gothic, when any two dentals combine, the result is st, and the tendency there most fully exhibited shows itself in the other Germanic tongues. The plainest examples of this kind of gemination are given by particles from old genitives. Anglo-Saxon mid, genitive middes, gives rise to amidst; Anglo-Saxon to-gegnas, agenst; Anglo-Saxon on-mong, Old English amonges, to amongst; Anglo-Saxon hwile, Old English whiles, to whilst: so also alongst, anenst, onst, dialectic wunst, once, betwixt; behest is from behaes, but the -t may be participial as in bequest from becwethan, bequeth. The second person singular of the verb ends in s from the second pronoun, *twa*, *tu*, *su*, in Gothic, Old Saxon, Old High German as well as in Latin, Greek, Sanscrit, and kindred tongues. The st which appears in Anglo-Saxon and Frisian, and has spread in the Germanic family, has often been explained as an imitation of two or three preteritive verbs, in which this person happens to end in st; Anglo-Saxon wâst (knowest), Old Saxon wêst, Gothic *vaist* is from the root *vid*,

sue; the *d* of the stem combines with the ending to make *st*, according to the Gothic law mentioned above. And there are a few like words. It may be that they started the ending, but it is plain that they would have no power according to the common operation of conformation, they could only be finger marks to direct the flood into a natural channel; with Anglo-Saxon *glitian*, *glitnian*, *glisian*, *glisnian* and later *gliteren* appear *glisten*, *glistnen*, *glistren*, which may be explained as dissimilated from *glisian* and the others; so also tapestry from French *tapisserie*, which has a stem *t* having about it, Latin *tapete*, Old English *tapet*.

In German a similar appearance of *t* is found in *obst*, *art*, *morast*, *palast*, *pabst*, in the verb, and in the dialects in many words.

The examples thus far given have shown continuous consonants dissimilated into mutes. The dissimilation of mutes oftenest produces fricatives. The first examples to which we direct attention are the German changes of *p* to *pf*, *kupfer*, copper, is from Late Latin *cuprum*. A strongly accented *p*, represented by *ph*, first appears in Old High German, which is followed in Middle High German by *pf*. The lips open from the closure of *p* so slowly that they remain in the *f*-position long enough to make the sound of that letter audible. This is a prevailing habit of articulation among the Germans; they utter *pf* for the old *p* regularly in certain positions, so that the two letters together are spoken of in etymological works as the aspirate which according to Grimm's law takes the place of the *p* of Low German languages. Whether the change is a weakening or strengthening may be a matter of doubt. Regarding it as a dissimilated gemination however, it is safe to say that the gemination of *p* to *pp* is a strengthening, while the dissimilation of *pp* to *pf* is a weakening; the first implies more breath, the last suggests a slower and feebler movement of the opening lips. The fact that the change is most thoroughly carried out at the beginning of words looks like strength. On the other hand it is a step towards a plain weakening, for the *pf* changes to *f*.

Completely analogous is the change of *t* to *ts*. Latin *put-eus*, *pit*, becomes in Old High German *phu*z*i*, in Middle High German *pfutze*. The opening of the tongue for *t* is so slow that it remains in the *s*-position long enough to give that sound distinctly. This *ts* is represented by a single character in German, and is one of its most striking peculiarities.

An analogous change is found of *k* to *kh*.

The transition is easy from these to the dissimilated gemination of a sonant to a sonant followed by a surd, e. g. of *d* into *dt*, *z* into *sz*, and the like. This is pronounced by the minute observer to be a frequent fact, though seldom or never recorded. To make a perfect sonant there should be sonant murmur before the closing and after the parting of the organ*s*. But it is said that the German habit is to part the vocal chords before parting the organs of the mouth, so that their final sonant consonants when prolonged end in surds; *und* is sounded as *undt*, *ab* as *abp*, *klug* as *klugk*, and the like. And our great authority in such matters, Mr. A. J. Ellis, tells us that final *v*, *z*, *th*, *zh* before a pause are pronounced in England *vf* (*fjvf*), *zs* (*izs*), *th th* (*smoodthth*), *zh sh* (*roozhsh* = *rouge*). "The prolongation of the buzz," he says, "is apparently disagreeable to our organs, and hence we drop the voice before separating them, thus merging the buzz into a hiss unless a vowel follows, on to which the voice can be continued, or a consonant, which naturally shortens the preceding one." Early Eng. Pronun., Part IV., p. 1104.

Initial surds on the contrary tend to geminate into surds plus sonants; the tardy opening of the organs gives time for the following vowel to impart its sonancy; German initial *s*, says Mr. Ellis, is sounded as *sz*.

A few examples are found of the mute lingual *t*, *d*, geminating into the lingual trills *r*, *l*: *tr* appears in cartridge from French *cartouche* from Italian *cartoccio* from Latin *charta*; treasure, French *trésor*, It. Sp. *tesero* from Latin *thesaurus*, Greek *θησαυρός*, may be mentioned: *dr* appears in French *perdr*x** from Latin *per*d*i*x**, partridge; *tl* is in myrtle, French *myrte*, Latin *myrtus*, Greek *μύρτος*, where the substitution of syllabic *l* for *e* may be favored by *t*, but it occurs

after other mutes, as in *periwinkle*, Latin *pervinca*, principle, syllable, and the like, where it looks like the simulation of a syllable of formation.

These minute explanations of words in which the latter half of the original letter undergoes dissimilation will make the process clear by which the former half is changed. The nasals here also afford the best examples: *bb* to *mb*—Latin *labrusca* changes to *lambrusca* in Italian and Spanish, *lambruche* in French; the nasal veil is left open while the lips are closing to *b*; *tt* to *nt*—Latin *palatium* changes to Old High German *phalantsa*; Latin *lutra*, French *loutre* appears in Italian and Portuguese as *lontra*; Latin *pictor* precedes French *peintre*, painter, and *laterna*, French *lanterne*, lantern, but in the two last words the *n* in related words may have had its influence; *dd* to *nd*—porringer, i. e. porringer from porridge; messenger, i. e. messenger, Old English messenger; passenger, French *passagier*; *cc* = *ss* to *ns*—example from example, and see more in Maetzner i., 174; *c* to *ye*, *yg*—Latin *cucumer* is French *concombre*, locust is *langouste*, jocolator is *jongleur*. To the frequent appearance of emerging nasals in the older tongues, attention will be called further on. Of the other consonants it must suffice to mention that *r* occasionally appears before its kindred linguals *s* and *th*, as in *hoarse* from Anglo-Saxon *hâs*, *swarth* from Anglo-Saxon *swaet*; and *s* before as well as after its kindred *t*, e. g. *idolaster*, for *idolater*, though such examples savor of simulation of the ending *-ster*, as much as of phonetic dissimilation.

If we turn to the semi-vowels, a number of facts present themselves which may be classified as dissimilated gemination, if we allow the term a liberal application. Such are those where a stem ending *i* or *j* changes in inflection to *ig* = *ij* = *iy*: Anglo-Saxon *lufian*, to love, is found written also *lufigan* and *lufigean*. It is generally thought that the *i* represents the semi-vowel *y*; then the explanation of *lufigan* is that the voice is sent forth for *g* = *y* before the organs have reached the consonant closeness, and is heard as the vowel. Similar in appearance and explanation is the declension of nouns

with stems ending in *w* or *u*; *ealu*, ale, has for its genitive *ealwes*, *ealuwes*, *ealowes*. The vowel is produced by sending voice through organs almost closed to *w*. These are regular appearances in the inflection of large classes of words in Anglo-Saxon, and are well known in other tongues; Old High German *palu*, bale, makes *palawes*; Sanscrit *sunu*, *sunawes*.

The other syllabic consonants show somewhat similar phenomena; *l*, for example, frequently geminates into a vowel and consonant, its vowel effect being represented usually by *u* = *u*: *mīlc*, milk, often appears as *mīluc*, *meoloc*; so *r*: Latin *metrum*, French *metre*, gives rise to meter; *m*: Anglo-Saxon *bōsm* to *bozom*; *n*: Anglo-Saxon *glisnian*, glisten; *s*: French *espace*, Latin *spatium*, and so regularly in words beginning with *sc*, *sm*, *sp*, *st*. Diez, i., 224.

That large and very important class of lengthenings, where a vowel under the accent rises to a diphthong, might also be naturally grouped with the foregoing. Such are those known as *guna* and *vridhhi* in the Sanscrit grammar, and in Anglo-Saxon and English grammar more often as *progression*, according to which *i* changes to *ai*, and *u* to *au* regularly in modern English, *wīf* being now pronounced *waif* and *hūs* *haus*. What takes place is that voice intended for *i* or *u* is thrown out as the organs begin to move toward the proper closure, and is heard as a glide from a much opener position up to the close *i* or *u*. A considerable number of mixed vowel sounds, as *o* from *a*, *e* from *a* and *i*, are sometimes of similar origin.

The reverse of this process occurs when the voice is thrown out while the organs are opening, giving a closer letter gliding to a more open one, as in the breakings of the Teutonic languages, in parasitic *w* and *y*; *cyar* for *car*, *gyarden* for *garden*; *hwaet*, *what*, for *haet*, and the like; so also in the change of *y* to *dy*, whence arise French *j* and English *j* = *dzh*.

Thus far illustrations have been found mainly in the modern languages of Europe, most of them in English. The history of the words in these languages is best known, and

therefore they furnish the best material for scientific study. But if the view here presented be correct, the appearances which we have called dissimilated gemination are produced by movements of the organs of speech so natural that we may expect to find them in all languages. In Latin and Greek there appears to have been no movement of the accent during the classic period, such as afterwards produced the abundant new gemination to which attention has been before directed, and doublings with or without dissimilation, which are found in the earliest remains are open to etymologic as well as phonetic explanation.

This etymologic is held the preferable, and as there are pronominal roots always equal to any emergency, all considerable classes of words which present these appearances are duly explained by them. It will answer our present purpose, to suggest a doubt in regard to one class of roots or stems ending in what might be a nasal dissimilation, such as $\lambda\alpha\mu\beta\text{-}\acute{\alpha}\nu\omega$, which might be a geminated $\lambda\alpha\beta$, i. e. $\lambda\alpha\beta\beta$ dissimilated to $\lambda\alpha\mu\beta$; $\lambda\alpha\nu\theta\text{-}\acute{\alpha}\nu\omega$, which might be from $\lambda\alpha\theta\theta$; $\theta\iota\gamma\gamma\text{-}\acute{\alpha}\nu\omega$, i. e. $\theta\iota\eta\eta$ -gano, which might be from $\theta\iota\gamma$; so Latin *lamb-o* from root *lap*; *find-o* from root *fid*; *tingo*, i. e. *fiŋg-o*, from root *fig* = $\theta\iota\gamma$. This class is numerous, and gives rise to a number of English words: see page 154, *spangle*, *tangle*, and others before referred to. This current explanation of them is that a pronominal *na* or *nu* was originally added in such a way as to be phonetically an insertion of *n*; then by the euphonic laws, *n* before a labial or palatal is changed into the cognate nasal, and all is supposed to be clear. A nasal dissimilation would not be less clear.

There are only left in the latest scientific grammars a few words in which "insertion" is admitted. Roby, Latin Grammar, I., 14, gives *sumptus* for *sum-tus*; *hiemps* for *hiems*; $\acute{\alpha}\nu\delta\rho\acute{o}\varsigma$ for $\acute{\alpha}\nu\epsilon\rho\acute{o}\varsigma$, $\mu\epsilon\sigma\eta\mu\beta\rho\acute{\iota}\alpha$ from $\mu\acute{\epsilon}\sigma\eta$ $\eta\mu\acute{\epsilon}\rho\alpha$; *Alcumena* for $\text{'}\Lambda\lambda\kappa\mu\acute{\eta}\nu\eta$; *Tecumessa* for $\text{'}\text{T}\acute{\epsilon}\kappa\mu\eta\sigma\sigma\alpha$; *Æsculapius* for $\text{'}\text{A}\sigma\kappa\lambda\eta\pi\text{-}\acute{\omega}\varsigma$. Corssen, Schleicher, and the others do not essentially enlarge the list. Mr. Ferrar, Comp. Gram., p. 175, gives the *s* in *monstrum* as a similar insertion, but the others have a pronominal stem for that.

In Mr. Peile's "Introduction to Latin and Greek Etymology," which is one of the latest and best of the works in English on that subject, and uses in a scholarly way the labors of Curtius, Schleicher, and the other great German authorities, there is a considerable chapter (Chap. ix.), devoted to "changes produced by want of clearness in pronunciation." A letter is slurred generally through laziness, he says, and an indefinite amount of indistinct sound is produced after the letter thus slurred, which in time takes the form of the nearest sound in the existing alphabet. Thus two letters grow out of one, and the old saying is justified that lazy people give themselves most trouble. He treats of the emergence of *u* = *w* after *k* and *g* as in *equos*, *pinguis*; of *i* = *y* after *k*, *g*, and *t*, described above in *cyar* for *car*, *gyarden* for *garden*, *tüne* for *tune*; of *d* before *i* and *y*, as in *Jacob* i. e. *Dzhacob* from *Iacob*; of added *h*; of added vowels, of which he gives examples from the Greek, initial like *ἀ-σθήρ*, *star*; *ὀ-δόντος*, *tooth*; medial like *ἡλ-υ θον* from *ελθ*; and the so-called "connecting vowel" which Bopp and Schleicher and the like make a pronominal stem; and finally added consonants, of which we treated first. They are despatched in a single page. He says: "These are not very numerous either in Greek or Latin." "They are among the most decisive signs of a decomposing language, and therefore are rather to be looked for in more modern tongues, as *gen-d-re* and *nom-b-re* in the French." Most of his space is given to English. "Plenty of examples in English may be seen by turning over the pages of any dictionary, e. g. *a-d-miral* (= *emir-al*, Milton's *amiral*), *a-d-vance* (*a-vancer*, *ab-ante*), *a-d-vantage*, *al-d-er* (Anglo-Saxon *alr*), etc. An auxiliary consonant is also found at the end of words, as *lamb* (Anglo-Saxon *lam*), *sound*, the vulgar *gownd*, etc."

The examples looked at in the light of the preceding discussion do not seem happily chosen. The labial *m* of *amiral* would not dissimilate into the lingual *d*, neither would the *v* of *avancer*; these are examples of etymological simulation; they affect to be compounded with *ad-*. *Lamb* has a stem *b*; the Gothic is *lamb*, and the *b* or *p* is in Old

High German, Old Saxon, Anglo-Saxon, Old Norse, Celtic and elsewhere; Lapp has *libbe*, *libba*, with *lamb*, and Gaelic has *lubhan* with *lumhan*.

Of more interest is it perhaps, to notice that Mr. Peile's theory of laziness and slurring seems to strike him as inapt in one at least of his English examples. He says: "In 'thunder' the *d* is interesting, because it does not occur between two consonants; the very full sound of the first syllable seems to be the cause of the need which is felt of a connecting link between it and the following vowel."

We have seen that in this whole class of appearances it is greater and not less stress which brings out the new letter, and that the change of *n* to *nd* under the accent is no more a weakening than that of *i* to *ai* in wife or *u* to *au* in house.